Title (en)

COMPUTATIONALLY EFFICIENT ARC DETECTOR WITH COHERENT SAMPLING

Title (de)

RECHENEFFIZIENTER LICHTBOGENDETEKTOR MIT KOHÄRENTER ABTASTUNG

Title (fr)

DÉTECTEUR D'ARC INFORMATIQUEMENT EFFICACE AVEC ÉCHANTILLONNAGE COHÉRENT

Publication

**EP 3121610 A1 20170125 (EN)**

Application

**EP 16179102 A 20160712**

Priority

US 201514807538 A 20150723

Abstract (en)

Switching interference is a primary artifact which affects the accuracy of arc detectors. To address switching interference, conventional arc detectors employ computationally intensive techniques which are often designed specifically for a target application. Thus, conventional arc detectors require a significant amount of hardware to accurately detect arc faults, which can increase costs of the power systems and prohibit wide deployment of arc detectors. With improved signal processing, a unique method for arc detection can accurately detect arc faults efficiently while tolerate switching interference from an inverter of the power system. Specifically, the method provides accurate but efficient arc detection by using a small Fast Fourier Transform (520) with coherent sampling (512) that is accomplished with a common clock generator (518) in combination with signal conditioning. The overall system (508) implementing the method is also programmable to suit a variety of target applications.

IPC 8 full level

**G01R 31/02** (2006.01); **G01R 19/25** (2006.01); H02H 1/00 (2006.01)

CPC (source: CN EP US)

**G01R 19/2509** (2013.01 - EP US); **G01R 31/1218** (2013.01 - CN); **G01R 31/1227** (2013.01 - CN); **G01R 31/40** (2013.01 - EP US); **G01R 31/52** (2020.01 - EP US); **H02H 1/0015** (2013.01 - EP US); **H02S 50/00** (2013.01 - CN); **H02S 50/10** (2014.12 - EP US); H02H 1/0092 (2013.01 - EP US); Y02E 10/50 (2013.01 - EP)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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